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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/605,812	06/28/2000	Steven R. Chalmer	EMS-00801	5356

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EXAMINER

TO, JENNIFER N

ART UNIT PAPER NUMBER

2195

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/605,812	CHALMER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jennifer N. To	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-14, 16-20, 22-31, 33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-14, 16-20, 22-31, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-3, 5-14, 16-20, 22-31, and 33-34 are pending for examination.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5-7, 9-11, 16-18, 22-24, 26-28, and 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Stewart et al. (hereafter Stewart) ("The Chimera II: A Real-Time Unix-Compatible Multiprocessor Operating System For Sensor-Based Control Application", Advanced Manipulators Laboratory, the Robotics Institute, Pennsylvania, 1989, pages 1-33).

4. As per claim 1, Stewart teaches the invention as claim including a method of providing a particular scheduler for a multitasking system for a processor, comprising:

choosing the particular scheduler from a plurality of schedulers, wherein at least one of the plurality of schedulers selects processes to be run from a plurality of run-able processes different from the plurality of schedulers and wherein choosing the particular scheduler is based on parameters that vary

Art Unit: 2195

according to run time conditions (page 4, Chimera II Features section; pages 15-17, Process Scheduler section);

setting a program counter to an address corresponding to code of the particular scheduler (page 15, Context Switch operation Section; pages 15-17, Process Scheduler section); and

the processor executing code at an address corresponding to the program counter (pages 15-17, Process Scheduler section).

5. As per claim 5, Steward teaches that wherein at least one of the schedulers is for statistical code profiling (page 16, lines 9-24).

6. As per claim 6, Steward teaches that wherein first one of the schedulers is for start up conditions and second one of the schedulers is for steady state operation (page 16, line 1 through page 17, lines 1-15).

7. As per claim 7, Steward teaches that wherein choosing the particular scheduler is performed by setting up a return from an exception that causes the scheduler to execute (page 15, Context Switch Operation section).

8. As per claims 9-11, 16-18, 22-24, 26-28, and 33-34, they are rejected for the same reason as claims 1, and 5-7 above.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-3, 8, 12-14, 19-20, 25, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steward et al. (hereafter Steward) ("The Chimera II: A Real-Time Unix-Compatible Multiprocessor Operating System For Sensor-Based Control Application", Advanced Manipulators Laboratory, the Robotics Institute, Pennsylvania, 1989, pages 1-33), as applied in claim 1 above, and in view of Perotto et al. (hereafter Perotto) (U.S. Patent No. 5630130).

11. Perotto was cited in the previous office action.

12. As per claim 2, Stewart teaches the invention substantially as claimed in claim 1. Stewart did not specifically teach the step of setting a stack pointer to an address corresponding to stack space for the particular scheduler and the processor using the stack space at the stack pointer after executing code at the address corresponding to the program counter.

13. However, Perotto teaches the step of setting a stack pointer to an address corresponding to stack space for the particular scheduler and the processor

Art Unit: 2195

using the stack space at the stack pointer after executing code at the address corresponding to the program counter (col. 7, lines 21-40).

14. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Steward and Perotto because Perotto teaching of setting a stack pointer to an address corresponding to stack space for the particular scheduler and the processor using the stack space at the stack pointer after executing code at the address corresponding to the program counter would improve the integrity of Steward's system by increasing the overall efficiency of the system by reducing power consumption, increasing response time, and leading to more efficient management of tasks (Perotto, col. 3, lines 29-31).

15. As per claim 3, Steward teaches the invention substantially as claimed in claim 1. Steward did not specifically teach that wherein all of the schedulers use the same stack.

16. However, Perotto teaches that wherein all of the schedulers use the same stack (col. 7, lines 40-44).

17. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Steward and Perotto because Perotto teaching of all of the schedulers use the same stack would

Art Unit: 2195

improve the integrity of Steward's system by increasing the overall efficiency of the system by reducing power consumption, increasing response time, and leading to more efficient management of tasks (Perotto, col. 3, lines 29-31).

18. As per claim 8, Steward teaches the invention substantially as claimed in claim 1. Steward did not specifically teach that wherein setting a program counter includes modifying a variable that is modified according to the particular scheduler that is chosen.

19. However, Perotto teaches that wherein setting a program counter includes modifying a variable that is modified according to the particular scheduler that is chosen (col. 4, lines 1-10).

20. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Steward and Perotto because Perotto teaching of setting a program counter includes modifying a variable that is modified according to the particular scheduler that is chosen would improve the integrity of Steward's system by increasing the overall efficiency of the system by reducing power consumption, increasing response time, and leading to more efficient management of tasks (Perotto, col. 3, lines 29-31).

Art Unit: 2195

21. As per claims 12-14, 19-20, 25, and 29-31, they are rejected for the same reason as claims 2-3, and 8 above.

***Response to Arguments***

22. Applicant's arguments with respect to claims 1-3, 5-14, 16-20, 22-31, and 33-34 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gulsen (U.S. Patent No. 5727211) teaches method for fast context switching between tasks.

Bronte (U.S. Patent No. 6061709) teaches task control executive.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is (571) 272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM, F 6AM- 2:30 PM.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax



Art Unit: 2195

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer N. To  
Examiner  
Art Unit 2195



SUPERVISOR PATENT EXAMINER